



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/633,967	08/04/2003	Ikuo Ishinabe	463P106	5164

7590 08/03/2004

Henry C. Nields  
Nields & Lemack  
176 E. Main Street Suite - 8  
Westboro, MA 01581

EXAMINER

ANDREA, BRIAN K

ART UNIT	PAPER NUMBER
----------	--------------

3662

DATE MAILED: 08/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/633,967

Applicant(s)

ISHINABE ET AL

Examiner

Brian K Andrea

Art Unit

3662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 04 August 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 11/14/03.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,545,749 to Anderson (hereinafter, "Anderson").

Anderson teaches a light wave distance measuring system, comprising a projection optical system 1, 3, 4, 5 (figure 1) having an optical axis 7 (figure 1) of outgoing light and for projecting a measuring light, and a photodetection optical system having an optical axis of a returning light 8 (figure 1) and for receiving a reflection light, wherein said photodetection optical system comprises a light receiving lens 21 (figure 4) for receiving and for converging the reflection light, a light receiving surface 9 (figure 1) where the reflection light enters, and a ring-like perforated multi-focal optical member 22 (figure 4) arranged between said light receiving surface and said light receiving lens (see column 6, lines 17-19) and for converging the light to said light receiving surface (see figure 4).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 3662

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson.

Anderson does not explicitly teach an actual aperture, or opening, in the objective lens 21 (figure 4). However, does teach that the light is transmitted from the exact center in a manner so as to achieve a perfect measurement spot (i.e. no distortion due to the light passing through the lens) (see column 4, lines 40-45). Additionally, the return light does not utilize the part of the objective lens that the transmitted light passes through because of the fact that mirror 5 (see figure 1) blocks that section from allowing the return light to pass through. Therefore, the use of an aperture in the objective lens would have been obvious as it would be the equivalent as the setup used in the system taught by Anderson.

5. Claims 3-7 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Anderson.

Anderson teaches the use of a multi-focal, ring-shaped lens 22 (see figure 4). Anderson also teaches that many different types of lenses may be used for this multifocal lens element (see column 6, lines 21-25). The different types of lens elements required by the claims (toric lens, aspherical lens, cone prism) are all either inherently included in the list provided by Anderson or would have been obvious to use for element 22 of Anderson because they are all functionally equivalent to each other and are all well-known in the art as different types of aspherical lenses.

6. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson in view of U.S. Patent No. 4,843,228 to Nakamura (hereinafter, "Nakamura").

Anderson teaches that the outgoing measurement light is transmitted through the center of the objective lens in a distance measurement system which uses the same objective lens for transmitting measurement light as well as receiving reflected light. Anderson does not teach using an optical axis for transmitting the light which is offset from the center of the objective lens. Nakamura, however, teaches that the optical axis used for the transmitted light in a distance measurement system which uses the same objective lens for transmitting measurement light as well as receiving reflected light may be offset from the center of the objective lens. It would have been obvious to modify Anderson to include this feature taught by Nakamura as a means for further compensating for differing distances of the measurement object.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The prior art has been cited to show the current state of the art of distance measurement apparatus' which use a common objective lens for transmitting and receiving measurement light.


8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian K Andrea whose telephone number is (703) 605-4245. The examiner can normally be reached on M-F 7:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Tarcza can be reached on (703) 306-4171. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BA

BA  
27 July 2004

  
BERNARR E. GREGORY  
PRIMARY EXAMINER  
A. U. 3662